



CONTENTS

BERNARD B. BRODIE AND THE RISE OF CLINICAL PHARMACOLOGY, <i>Erminio Costa, Alexander G. Karczmar, and Elliot S. Vesell</i>	1-21
THE BIOCHEMICAL PHARMACOLOGY OF ATRIAL PEPTIDES, <i>Philip Needleman, Edward H. Blaine, James E. Greenwald, Marshall L. Michener, Clifford B. Saper, Paul T. Stockman, and H. Eser Tolunay</i>	23-54
PERCUTANEOUS ABSORPTION OF DRUGS, <i>R. B. Stoughton</i>	55-69
NEUROTRANSMITTER RECEPTORS AND PHOSPHOINOSITIDE TURNOVER, <i>De-Maw Chuang</i>	71-110
RATIONAL DESIGN OF ANTIVIRAL AGENTS, <i>M. A. McKinlay and M. G. Rossman</i>	111-122
LEUKOTRIENE RECEPTOR ANTAGONISTS AS POTENTIAL THERAPEUTIC AGENTS, <i>David W. Snyder and Jerome H. Fleisch</i>	123-143
BIOCHEMICAL MECHANISMS OF INDUCTION OF HEPATIC PEROXISOME PROLIFERATION, <i>Edward A. Lock, Angela M. Mitchell, and Clifford R. Elcombe</i>	145-163
BIOACTIVATION IN CHEMICAL TERATOGENESIS, <i>M. R. Juchau</i>	165-187
METHODS FOR EVALUATING CHEMICAL GENOTOXICITY, <i>Gary M. Williams</i>	189-211
THROMBOXANE, PROSTOGLANDIN AND LEUKOTRIENE RECEPTORS, <i>Perry V. Halushka, Dale E. Mais, Philip R. Mayeux, and Thomas A. Morinelli</i>	213-39
CHARACTERIZATION OF HUMAN MICROSOMAL CYTOCHROME P-450 ENZYMES, <i>F. Peter Guengerich</i>	241-64
THE PHARMACOLOGICAL TREATMENT OF DYSLIPIDEMIA, <i>Carlos A. Dujovne and William S. Harris</i>	265-88
CHEMICAL CODING OF NEURONS AND PLURICHEMICAL TRANSMISSION, <i>J. B. Furness, J. L. Morris, I. L. Gibbins, and M. Costa</i>	289-306
PERIPHERAL TYPE BENZODIAZEPINE RECEPTORS, <i>Ajay Verma and Solomon H. Snyder</i>	307-22

vi CONTENTS (continued)

THROMBOLYTIC THERAPY IN ACUTE MYOCARDIAL INFARCTION, <i>Nils U. Bang, Olaf G. Wilhelm, and Michael D. Clayman</i>	323-41
TISSUE KALLIKREINS AND KININS: REGULATION AND ROLES IN HYPERTENSIVE AND DIABETIC DISEASES, <i>Harry S. Margolius</i>	343-64
THE EXCITATORY AMINO ACID RECEPTORS, <i>Daniel T. Monaghan, Richard J. Bridges, and Carl W. Cotman</i>	365-402
ANIMAL MODELS FOR THE STUDY OF DRUGS IN ISCHEMIC STROKE, <i>S. E. Karpiak, A. Tagliavia, and C. G. Wakade</i>	403-14
TOXICOLOGY OF COMPLEX MIXTURES OF INDOOR AIR POLLUTANTS, <i>Joellen Lewtas</i>	415-39
MODULATION OF GLUTAMATE RECEPTORS: MOLECULAR MECHANISMS AND FUNCTIONAL IMPLICATIONS, <i>J. T. Wroblewski and W. Danysz</i>	441-74
TRANSFER FACTOR: PAST, PRESENT AND FUTURE, <i>H. Hugh Fudenberg and H. Haskell Fudenberg</i>	475-516
REVIEW OF REVIEWS, <i>E. Leong Way</i>	517-24
INDEXES	
Subject Index	525
Cumulative Index of Contributing Authors, Volumes 25-29	537
Cumulative Index of Chapter Titles, Volumes 25-29	539

SOME RELATED ARTICLES IN OTHER ANNUAL REVIEWS

From the *Annual Review of Physiology*, Volume 51, 1989:

- Structural and Functional Diversity in Vertebrate Skeletal Muscle Nicotinic Acetylcholine Receptors*: J. H. Steinbach
Properties and Diversity of (Na-K-Cl) Cotransporters: M. Haas
Role of G Proteins in the Regulation of the Cardiovascular System: J. D. Robishaw and K. A. Foster
Genetic Regulation of β -Adrenergic Receptors: S. Collins et al
Structure and Regulation of Muscarinic Receptors: M. I. Schimerlik
Hormonal Regulation of POMC Gene Expression: D. J. Autelitano et al
 Ca^{2+} , Cross-Bridge Phosphorylation, and Contraction: C.-M. Hai and R. A. Murphy
Regulation of Smooth Muscle Contractile Elements by Second Messengers: K. E. Kamm and J. T. Stull

From the *Annual Review of Neuroscience*, Volume 12, 1989:

- Structure of the Adrenergic and Related Receptors*: B. F. O'Dowd, R. J. Lefkowitz, and M. G. Caron
Novel Neurotrophic Factors, Receptors, and Oncogenes: P. A. Walicke
Acute Regulation of Tyrosine Hydroxylase by Nerve Activity and by Neurotransmitters via Phosphorylation: R. E. Zigmond, M. A. Schwarzschild, and A. R. Rittenhouse
Involvement of Hormonal and Neuromodulatory Systems in the Regulation of Memory Storage: J. L. McGaugh
Spider Toxins: Recent Applications in Neurobiology: H. Jackson and T. N. Parks

From the *Annual Review of Medicine*, Volume 40, 1989:

- Corticotropin-Releasing Hormone: Clinical Applications*: L. K. Nieman and D. L. Loriaux
Neuropeptides and Inflammation: The Role of Substance P: D. G. Payan
Anticoagulants During Pregnancy: J. S. Ginsberg and J. Hirsh
Thrombolytic Therapy in Acute Myocardial Infarction: M. L. Simoons
Systemic Effects of Vitamin D: H. Reichel and A. W. Norman

From the *Annual Review Of Biochemistry*, Volume 58, 1989:

- Glutathione S-Transferases: Gene Structure, Regulation, and Biological Function*: C. B. Pickett and A. Y. H. Lu
The Biochemistry of P-Glycoprotein-Mediated Multidrug Resistance: J. A. Endicott and V. Ling
Protein Radical Involvement in Biological Catalysis?: J. Stubbe
Biochemistry of Oxygen Toxicity: E. Cadenas
The Multi-subunit Interleukin-2 Receptor: T. A. Waldmann
Hemopoietic Cell Growth Factors and their Receptors: N. A. Nicola